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Milking Tubes.

Editor Florida Agriculturist:

I have a native Florida cow that gives a good mess of unusually rich milk for a common cow, but she is very hard to milk. Sometime ago I sent for a set of coin silver milking tubes. I have been using them for two weeks or more. I find that I can milk in about half the time that it took to milk by hand and with apparently more comfort to the cow. This is shown by the fact that when I milked by hand she was very restless, and would try to kick, as though it hurt her. Now she does not object when I put in the tubes and seldom tries to lift a foot while the milk is running through them. I am careful to strip her thoroughly by hand after the flow through the tubes stops.

I have a dim recollection that I have seen it stated in some agricultural paper, that the use of milking tubes, regularly, was injurious to the cow. Is this true, and is so, why?

Inquirer.

(We have not had sufficient experience to answer this question, and will pass it along to our readers. Have any of you had experience with milking tubes and if so, with what result?)

We also have seen the statement that the continued use of tubes was injurious, but do not understand the reason. We cannot find anything about them in any book that we have. It seems strange that, if they are not injurious, that they have not come into more common use. But they are never mentioned in stock or dairy papers except to say that they may be used in certain cases of injury or of something that renders milking by hand difficult or impossible. We shall be glad to hear from some of our readers, who have dairies, as to what they know about the use of milking tubes. If this is seen by the editors of any of our exchanges, who can throw any light upon this subject, we shall feel much obliged to them if they will give us what information they can.—Ed.)

Fungus and the White Fly.

Editor Florida Agriculturist:

From the letters and papers received recently, I have learned of the continued spread of the white fly (*aleothes citrii*), and of the consequent alarm and discouragement. I feel that I may do some good for the orange industry by giving you some facts of my experience, for publication in your valuable paper. For

the sake of brevity this article will be somewhat didactic, but every statement here can easily be proven true by everyone who will investigate.

One of the first places infested by white flies was Manatee county, in "Fair Oaks Grove," less than one mile from my nursery. By closing my grounds to the passage of persons in teams and thoroughly spraying every tree on which I could find a pupae or a fly, I kept them from becoming numerous, for several years. Within three or four years the "Red Fungus" appeared, and gave us hope, but the fungus could not cope with the flies as it only increased by spores. About this time planting of citrus trees almost ceased here. Two or three years after this, while Prof. H. J. Webber was here on a visit, he found some of the Brown Fungus, and gave us more hope. The Red Fungus is quite a help, but it cannot increase as fast as the flies. But with favorable conditions (heat and plenty of rain), the Brown Fungus can increase many thousand times faster than the white fly.

On the second of August, 1902, I carefully looked all over my nursery trees to find for shipment, some Fungus trees that had been ordered. I found no good "ripe" fungus, but did find from 400 to 1,000 live pupae on each leaf. One week later, August 9th, I examined again, and on ten leaves there were only five live pupae, so in one week the Brown Fungus had destroyed more than 99 per cent of the pupae.

Since both these fungi became fairly well scattered and we have learned what they could do for us, tree planting commenced again. Florida statistics will show that this county has raised and shipped more oranges per capita, than any other county; also the acres of new groves here show that we have been planting as many trees annually, as other counties. When conditions are not favorable to the development of the Fungus the flies will increase and do damage sometimes, or sometimes they will almost prevent any crop, but since the fungi got well spread, only once have the flies reduced our crop about 25 per cent, and two or three seasons about 10 per cent, but most seasons our groves bear all they can on the fertilizing and cultivation they get.

Before the Fungi appeared the flies seemed to weaken the trees so that the common long and chaff scale multiplied so rapidly that they made

the trees look "sorry," damaged them seriously. As soon as Prof. Webber "located" the Brown Fungus, I planted small trees in cans and put them among the large trees having the fungus. In a few weeks the fungus was on my nursery trees. Then I moved them to my nursery and grove trees, so I got the fungi started by the time the flies became so numerous, so my trees were not seriously hurt by the scales.

All groves that get a start of the fungi by the time the flies become thick, escape the severe visitation of the scales. And yet the white fly is a great plague and should be "kept out" as long as possible. In summertime they breed on many annual weeds, rose bushes, and ornamental plants, so there is but little chance but what ultimately they will be everywhere south of 33 or 34 N. L. I know it is possible to make a culture of the Brown Fungus, that we can spray on our trees in dry weather and get it actively to work; also fungus will yet be found that will kill the winged white fly. Prof. Gossard was working on the culture problem when he left Lake City, and now Prof. Borger is looking after a fungus that will attack the fly and destroy it as the Brown and Red Fungus destroy the pupae. Then we may see the last of the white fly. At present the Brown and Red Fungi will enable us to produce profitable crops of oranges and peaches, and no person should be seriously discouraged.

A. J. Pettigrew.

Manatee County.

Fig Culture.

The Peach Grower publishes an interesting article on this subject:

For many years the Southern farmer has cultivated figs in a limited way around door yards; in fact many growers believe that figs cannot be successfully grown in orchards. As an old farmer remarked to us, "The fig tree has got to smell your breath to do well." This however, is all erroneous. Figs are now grown in very large orchards in Mississippi, Louisiana and Texas, with good results. The fig tree is a ravenous feeder and delights more in liberal application of all kinds of manures than frequent cultivation, in fact, deep cultivation around the trees is rather more harmful than good. The demand for figs is rapidly increasing, as the fruit is gradually introduced in Northern mar-

kets; its peculiar sweetness and laxative properties make it healthy, desirable fruit to all who once have acquired a taste for figs.

Besides being a delightful fruit in its ripe stage, it is peculiarly adapted for preserving, and there is hardly any preserve higher in price or more in demand than preserved figs, when properly treated.

Planting.—Figs do best on sandy, well drained loam; the figs can be easily and cheaply propagated from cuttings, and it is not unusual to see cuttings planted in the spring mature figs in a limited way the same year. Fig cuttings, or trees, should be planted fifteen feet apart each way, or they may be planted in rows fifteen feet apart and eight feet in the row; it is not a bad idea to plant figs along fences, out-houses, barns and chicken yards. Chickens do well under fig trees, and so do the trees in consequence.

Varieties.—There are many excellent varieties, such as: Celeste or sugar Fig, the best for all purposes. White Adriatic, very large, juicy fruit, very thin skinned, good bearer. Brown Turkey, medium size, color brown, very prolific.

Large Blue Ischia, dark blue, very large and of fine taste.

Lemon Fig, a peculiar lemon flavored fig.

In the Coast country there is a local fig called the Magnolia Fig, which is very desirable on account of its size, sweetness and prolific bearing qualities. It can be procured from any Coast country nursery or grower. Fig trees have been known to yield 1000 pounds of fruit to the tree in one season.

Fertilizers.—A heavy application of good strong barnyard manure each year is desirable, even liquid manures are keenly appreciated by fig trees. Where barnyard manure is not available in sufficient quantities, we would advise to use monthly on small trees three pounds of fertilizer containing: Nitrogen, 5 per cent; actual potash 9 per cent; available phosphoric acid, 9 per cent, to each tree.

Cultivation.—In a young orchard cultivation should be frequent and very shallow, especially close to the trees. Other light crops may be grown between the rows. As the orchard grows larger very little if any, cultivation is required, or just sufficient to keep down excessive weeds and grass and assist in applying fertilizers.

It is quite frequent that fig trees,